DOCUMENT RESUME

ED 154 110 CE 013 608

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TITLE Practical Considerations in Evaluating Patient/Consumer Health Education Programs.
INSTITUTION Center for Disease Control (DHEW/PHS), Atlanta, Ga.
PUB DATE Aug 76
NOTE 7p.; Paper presented at the National Conference on Hospital-Based Patient Education (Chicago, Illinois, August 9-10, 1976); For related documents see CE 013 467-483 and CE 013 609

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Case Studies; Educational Development; Evaluation Methods; Health Education; Health Personnel; Health Services; Hospital Personnel; Hospitals; *Hospital Schools; *Medical Services; Patients (Persons); Program Effectiveness; *Program Evaluation; Public Health
IDENTIFIERS Patient Education

ABSTRACT

This report contains brief descriptions of seven evaluative efforts and outcomes of health education programs, some considerations of problems encountered in evaluating the programs, and detailed descriptions of two case studies: (1) a process evaluation of preoperative teaching and (2) a retrospective study of visiting nurse association use by patients with diabetes and ostomies. (TA)

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PRACTICAL CONSIDERATIONS IN EVALUATING PATIENT/CONSUMER HEALTH EDUCATION PROGRAMS[1]

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by

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During the past 2 1/2 years the Office of Consumer Health Education, College of Medicine and Dentistry of New Jersey, has been involved in evaluation of numerous health education programs. Brief descriptions of seven evaluative efforts follow, along with some considerations of problems encountered. This is followed by two more detailed case studies.

Brief Descriptions of Evaluative Efforts and Outcomes

1. Data from the first year of a veneral disease (VD) hotline at Monmouth Medical Center showed that, although there was a substantial increase in visits to the clinic and emergency room and a modest increase in treated cases, the causal contribution of the hotline to the increase could not be stated with certainty. The cost per call to operate the hotline was excessive and could be reduced by making the hotline serve for multiple health problems. A report of this evaluation appears in the May-June 1976 issue of Public Health Reports.[3]

2. A brief study of diabetes classes also at Monmouth Medical Center revealed some weaknesses in the data collection process and in certain areas of instruction. The program has been modified in an attempt to correct these problems. Further evaluation will be attempted at a later date.

3. The Department of Community Health Education at the Medical Center measured the outcomes of a Smoke-No-More program after 6 months, for two groups using different approaches--one a "soft sell" and the other a "hard sell." One-third ceased smoking in the former group and 17 percent in the latter.

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[1] Presented at the National Conference on Hospital-Based Patient Education, August 9-10, 1976, Chicago, Illinois, sponsored jointly by the American Hospital Association (840 N. Lake Shore Dr., Chicago, Illinois 60611) and the U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, Bureau of Health Education (Atlanta, Georgia 30333).

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[3] Bryant, N.H., Stender, W., Frist, W., Somers, A.R. VD hotline: an evaluation. Public Health Reports 91(3): 231-235, May-June 1976.

4. The outcomes of patient teaching in the diabetic clinic at Morristown Memorial Hospital were measured using weight control and blood sugar as independent variables. When compared with a control group that did not have similar instruction, no statistical difference was revealed, though there is some question as to whether the particular variables selected for measurement were appropriate for determining the success of a health education program.

5. St. Francis Medical Center, Trenton, evaluated its Health Carnival to determine its value in promoting health actions. Six months follow-up of health screenings revealed that:

    a. 30 percent who had elevated blood sugars saw physicians;
    b. 60 percent who failed the hearing test were followed in the hospital's clinic;
    c. 72 percent with elevated blood pressures saw their physicians;
    d. 30 percent of the total number of senior citizens who signed up for flu shots went on the appointment day to receive the shots.

6. An experimental summer health education program for 35 12-year-olds during 1974 was followed up by a 1-day evaluation session 4 months later, attended by the students, their parents, and the project instructor. There was generally a high correlation among the parent and student respondents to the evaluation concerning the effectiveness of the program. A change in eating patterns of snacks - to fruit and nuts from the usual chips and soda - reflects a major success in a portion of the program that was highly stressed. It also shows self-direction in health matters by the children since snacks are almost entirely under their control while other meals may not be.

7. The most ambitious evaluation project undertaken by Office of Consumer Health Education involves patient teaching at Shore Memorial Hospital. A retrospective study has been conducted with the cardiac patients of a group practice at Mainland Medical Center who have received teaching from a nurse-health educator, including a planned educational program while hospitalized as well as reinforcement at subsequent office visits. These patients were compared with a control group of patients of other physicians in the same area. The evaluation is designed to determine health education effects on risk factor reduction, modification of lifestyle, and understanding of the disease process as it applies to therapy. Preliminary findings from the retrospective study indicate a reduced hospital readmission rate in the experimental group as compared with the control group.

Some Problems Encountered in Evaluation

Our attempts to evaluate programs have brought into focus a specific set of problems and obstacles:

1. While objectives of programs are usually stated clearly, they are often not measurable, especially in terms of costs or behavior modifications.

2. Obtaining the necessary data for evaluation purposes is essential. Unless the evaluation procedure is carefully planned ahead of time, the appropriate data may not be available or, if available, may be incomplete or even inaccurate.

3. Another concern has to do with data collection--who will collect it, and how will it be paid for. Unless a specific person is responsible for evaluation data with adequate financial means to carry through the project, the importance of evaluation will probably not be recognized. Thorough knowledge of the purposes and plan of evaluation will help insure cooperation from involved staff members.

4. Long term follow up represents an extremely difficult and sometimes impossible task in some studies. There may be no way to follow up patients or it may be impractical to do so. While there may be an eagerness to show some results as soon as possible, many programs may not show results for years.

5. The factor of cost is extremely important in all evaluations. A specific amount should be included in the program budget if more than just the answering of a questionnaire is planned. Staff personnel often do not have the time nor the expertise to plan and carry out a complete evaluation. Outside consultant help may have to be paid for as well as part-time students to collect and tabulate data. In a more elaborate study, costs for computer time should be included. Cost is one of the biggest hinderances to long term follow up in evaluation, which must be realistically considered in planning such studies.

6. Population size is another consideration. Many programs do not have large enough numbers of participants to make them statistically significant. Higher numbers may be reached in some programs after they have been repeated several times over a period of a year or two. Even then, with changes in program structure and evaluation instruments, results are delayed.

7. Along with this is the problem of finding a control population, which is often expensive, time consuming, and in some cases impractical or impossible.

8. One final concern has to do with the results and what is done with them. A major purpose of evaluation is educational--it shows weakness in the process of a program and indicates corrections needed. Another purpose is to examine program outcomes and measure effectiveness. The evaluation is not meant to point a finger but to help in

further development and changes in the programs. No one wants poor results, however, and some institutions are reluctant to release results that show weaknesses. Care should be taken, therefore, in explaining the reasons and need for evaluation while stressing the non-threatening and constructive aspects.

Case Study I--Process Evaluation of Preoperative Teaching[1]

A preoperative patient teaching program was begun in January 1974 at Our Lady of Lourdes Hospital, a 400-bed community hospital in Camden, New Jersey. The goals of the program were to reduce psychological stress, lessen postoperative discomfort, and hasten recovery by providing adequate preoperative instruction as a right of each surgical patient.

Original program organization centered on a classroom situation held twice each evening. This method proved unsatisfactory when the results of a 3-month trial period revealed that only 50 percent of the 20 to 30 patients scheduled daily for surgery attended classes. The teaching program was changed to the one-to-one teaching method now being used, where all patients scheduled for surgery were approached by nurse instructors. Details of procedures that would take place before, during, and after surgery were discussed. Simple breathing and leg exercises were demonstrated, and patients and family members were encouraged to ask questions.

At the end of the program's first year an evaluation questionnaire was distributed for patients to complete. Each questionnaire was distributed and picked up by the patient education coordinator several days postoperatively but before the patient was discharged. It included questions concerning the emotional support received by the patients from the instructors while they gave factual information and answered questions. Other questions were designed to determine the program's value and effectiveness. Excluded from the study were pediatric, cardiac, and local anesthesia patients. Using a table of random numbers, six patients were surveyed daily until a total of 100 questionnaires were completed. The purpose of the evaluative questionnaire was to determine if the preoperative teaching program was being carried out properly and if it was meeting any of its original objectives.

The findings indicated that the patients and their families found the program helpful and wanted it continued. It is important that the hospital administrators be aware of this fact, since the program represents an additional cost in the hospital budget -- although minimal when considering the average per diem cost. What cannot be measured is the amount of good will toward the hospital engendered by the program.

Results of the questionnaires indicated the need to intensify the instruction in the area of postoperative exercises, and steps have been taken to accomplish this goal.

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[1]Hannaberv, J. Process evaluation of preoperative teaching. First International Congress in Patient Counselling, Amsterdam, April 1976.

The evaluation sought to determine if at least one of the program's objectives was met: namely, does preoperative teaching allay fears and anxiety. Answers to related questions indicated that a large majority of patients were more relaxed after teaching and that over one-third had reduced anxiety. It is also understood that for some patients the effects of stress reduction was related, perhaps, more to the attitude and presence of the instructor than to the information and teaching.

Although 77 percent of the respondents indicated that they read and understood the surgical consent form, it is felt that this is highly unlikely because of the detailed and complex nature of the forms.

The inherent limitations of a subjective evaluation such as the one described here are recognized. It is generally acknowledged that respondents tend to offer the answers they think the investigators want to hear. This tendency may be even more pronounced among respondents who, like the surgery patients at Our Lady of Lourdes, have recently undergone a rather trying ordeal. Patients may fear appearing "ungrateful" to those who they believe have sincerely tried to help them through a difficult situation.

In an effort to overcome this bias, the patient education coordinator rather than the nurse-instructors--conducted the survey. The coordinator had neither participated in the preoperative teaching nor had any other prior contact with the patients surveyed. It was hoped that, if the coordinator distributed and explained the questionnaires, the patients' responses would reflect their true feelings rather than a "desire to please." Unfortunately, the degree to which this strategy succeeded is unknown.

The evaluation of the preoperative teaching program at Our Lady of Lourdes did not utilize a control group. The hospital recognized that this would limit the usefulness of the survey's findings. Nevertheless, it was decided against using a control group because this would deny what was seen as an essential health service--preoperative teaching--to those patients selected as controls.

Under consideration now is the possibility of undertaking this type of survey again, perhaps, in cooperation with another similar hospital that does not offer preoperative teaching. The surgical patients in this hospital carefully matched to those at Our Lady of Lourdes would then serve as the controls.

In conclusion, although no statistical analysis is possible from this kind of evaluation, the hospital and the personnel involved in the teaching feel that the questionnaire results indicate that the program is reaching its goals.

Case Study II--Retrospective Study of Visiting Nurse Association Use by Patients with Diabetes and Ostomies

The Coordinator of Consumer Health Education at Perth Amboy General Hospital (PAGH) heard a remark made by the Director of the County Visiting Nurse Association (VNA) that her nurses seemed to make fewer visits to PAGH patients who had received education before discharge.

As a result of this remark, the evaluation person at the Office of Consumer Health Education (OCHE) is presently working with the health education coordinator at (PAGH) on a trend analysis utilizing the records of the VNA in Middlesex County. The overall objective of the evaluation is to determine if discharged cancer patients receiving a colostomy or discharged diabetic patients requiring insulin injections received fewer visits from the VNA in Middlesex County than patients treated for the same conditions but discharged from four other area hospitals not having a coordinated patient education program. It is anticipated that patients receiving patient education while hospitalized at (PAGH) required fewer visits by the VNA than patients who were treated for the same conditions at the other four hospitals. By comparing the number of visits to ostomy and insulin dependent diabetic patients from all five county hospitals, it is expected that we can develop a relative effectiveness index of the PAGH program. From these data, we will calculate a cost effective index which could produce strong evidence of cost effectiveness of the program at PAGH as compared with the other four hospitals--some of which have discharge planning programs. OCHE is presently in the process of collecting the data.